Claims

1. A method for the production of a powder consisting of a $Cu(In,Ga)Se_2$ compound,

characterized in that

it comprises the following steps:

- alloying Cu and In and/or Cu and Ga to form a CuIn and/or CuGa alloy with a sub-stoichiometric fraction of Cu,

- producing a powder consisting of the CuIn and/or CuGa alloy,

- adding Se as well as either KI or NaI to the powder,

- heating up the mixture until a melt is formed in which the $Cu(In,Ga)Se_2$ recrystallizes and, at the same time, the powder particles to be produced grow,

- cooling off the melt in order to interrupt the growth of the particles.

2. The method according to Claim 1,

characterized in that,

after cooling off, the KI or NaI is removed by means of dissolution with water.

3. The method according to one or both of Claims 1 or 2,

characterized in that

the ratio of the molar amount of Cu employed to the sum of the molar amount of In employed plus the molar amount of Ga employed lies between 0.8 and 1.

4. The method according to one or more of the preceding claims,

characterized in that

the ratio of the molar amount of Ga employed to the molar amount of In employed lies between 0 and 0.43.

5. A mono-particle membrane solar cell, comprising a back contact, a mono-particle membrane, at least one semiconductor layer and a front contact,

characterized in that

the mono-particle membrane contains a powder produced by a method according to one or more of Claims 1 to 4.